

**System and Method for Updating
Personal Financial Information**

BACKGROUND OF THE INVENTION

1. Technical Field

5 The present invention relates in general to a method and system for updating personal financial information. More particularly, the present invention relates to a system and method for using client based personal financial software to transmit changes to the user's address and
10 contact information to one or more online financial institutions.

2. Description of the Related Art

Personal financial software, such as Intuit's Quicken™ software and Microsoft's Money™ software, are quite popular
15 with consumers and small businesses that need to keep track of income and expenses. The first personal financial software programs were little more than computer based checkbook registers, enabling the user to keep their checkbook and savings account registers on their computers
20 and having the software perform simple mathematical functions to help the user balance the account.

Over time, these software programs evolved into complete money management packages enabling users to track not only checkbooks and savings accounts, but to also track
25 a variety of loans and investments as well as providing sophisticated money management tools such as budgeting, net worth analyses, reporting, and graphing.

With the increased popularity of the Internet, many consumers access bank accounts and other accounts from their home computer using a simple Internet connection. Banks, brokerages, and other financial institutions provide Internet sites, also known as Web sites, so that their customers can access accounts and other information. These Web sites often allow the user to check account balances and recent transactions, apply for loans, buy and sell stocks, bonds and other securities, and read about promotions and services offered by the financial institutions. Indeed, consumers often choose a financial institution based largely on the quality and functions provided by the institution's online Web site. Some financial institutions, such as online brokerages, are exclusively Web-based without any traditional "brick and mortar" branch offices.

Personal financial software vendors have also incorporated Internet capabilities in their software packages. Often, these services allow a customer to pull the data from a Web site. For general data, such as stock quotes, a publicly accessible Web site can be used. However, for the customer's personal data a secured site is generally preferred. In a secured site, the customer often provides a user identifier and a password to access the customer's data. The user identifiers and corresponding passwords can be stored by some financial software packages in order to retrieve the customer's information quickly and without having the customer re-type the user identifier and password each time he accesses the Web site. More secure implementations, however, may require the user to enter either both the user identifier and password or at least

the password before accessing the customer's account at the online financial institution.

Customers often have many financial institutions and each of the institutions may have an online presence. The 5 proliferation of financial institutions has largely stemmed from the increased availability of such institutions as well as increased competition between institutions for customers. For example, online brokers often provide a cash incentive to new customers to entice the customers to 10 deposit money and open an account with the broker. Because of such incentives, many customers wind up with many online accounts.

Certain customer information is common to each of the online financial institutions. For example, the customer's 15 name, address and telephone number is usually maintained by each financial institution. In addition, many financial institutions keep track of customer's fax numbers and email addresses. If a customer moves or changes his contact information and fails to notify a financial institution, 20 important documents and other things mailed to the customer may not be received. Because of the increase in the number of financial accounts owned by modern day users, notifying each of the financial institution regarding a change in contact information is often challenging.

25 What is needed, therefore, is a way to notify online financial institutions regarding contact information changes without having to manually contact each institution individually.

SUMMARY

It has been discovered that a client-based personal financial software program can be used to notify financial institutions regarding customer contact changes and have 5 such changes be reflected in the financial institution's records. The user keeps his personal contact information in a data area accessible to the personal financial software. When the client contact information is changed, the personal financial software program asks the user 10 whether he wishes to report the changes to one or more financial institutions.

Information about the financial institutions is also maintained in a data store accessible by the personal financial software program. The information includes a 15 name identifying the financial institution along with an online address used to contact the financial institution. The online address may be a Web address, an email address, or a modem telephone directory used to access the financial institution's network. Additionally, the financial 20 institution information may include the client's user identifier and the client's password.

The user selects one or more financial institutions that have been configured at the client computer system. When the user requests to make the changes, the software 25 sends the updated client contact information to each of the selected financial institutions.

The financial institutions each receive a client information update request from the client computer. Software running on the financial institution's online site

validates the client using the client's identifier and password or other information that it used to identify the client on the financial institution's online site. If the client is validated, the update information is received and 5 used to update the financial institutions client data. In addition, the financial institution may return a message to the user indicating whether the update request was successfully processed.

The foregoing is a summary and thus contains, by 10 necessity, simplifications, generalizations, and omissions of detail; consequently, those skilled in the art will appreciate that the summary is illustrative only and is not intended to be in any way limiting. Other aspects, inventive features, and advantages of the present 15 invention, as defined solely by the claims, will become apparent in the non-limiting detailed description set forth below.

CONFIDENTIAL

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be better understood, and its numerous objects, features, and advantages made apparent to those skilled in the art by referencing the 5 accompanying drawings. The use of the same reference symbols in different drawings indicates similar or identical items.

Figure 1 is a network diagram showing client contact information being sent to financial institutions and used 10 to update client data files;

Figure 2 is a user interface sequence showing the interface presented to the user by a personal financial software program;

Figure 3 is a component diagram showing the components 15 used to update client information on both the client computer system and the financial institution's computer system;

Figure 4 is a flowchart showing the processing performed on the client computer system;

20 Figure 5 is a flowchart showing the processing performed by the financial institution's computer system; and

Figure 6 is a block diagram of an information handling system capable of implementing the present invention.

DETAILED DESCRIPTION

The following is intended to provide a detailed description of an example of the invention and should not be taken to be limiting of the invention itself. Rather, 5 any number of variations may fall within the scope of the invention which is defined in the claims following the description.

Figure 1 is a network diagram showing client contact information being sent to financial institutions and used 10 to update client data files. Client device **100** may be a personal computer, a handheld computing device, or any other computing device capable of running personal financial software **105**. Personal financial software **105** is used by the user to keep track of and analyze the user's 15 personal financial data. As used herein, the terms "user" and "client" are used interchangeably and means the user of client device **100** who is also the client of one or more financial institutions.

Personal financial software **105** maintains finance 20 program data **110** which includes information provided by the user. Finance program data **110** includes information regarding the financial institutions used by the user, including online addresses and access information pertaining to such institutions. Finance program data **110** 25 also includes address data **115**. Address data **115** includes contact information regarding the user. This contact information may include the user's name, address, phone number(s), fax number, email account(s), and any other information pertaining to contacting the user. This

information may also include identification information corresponding to the user such as a social security number. In addition, address data 115 need only be accessible to personal financial software 105. For example, the data 5 could be stored in a contact area in a separate program, such as a personal information manager ("PIM"), provided by a separate program such as Microsoft's Outlook™.

When the user wishes to update his contact information maintained by one or more financial institutions, personal 10 financial software 105 transmits one or more update requests 120 to one or more financial institutions. Each of the update requests 120 is electronically addressed to a particular financial institution. Each request includes the client's updated contact information, a client 15 identifier identifying the client to the financial, and an access code, password, or other information used to verify the identity of the user. Update requests 120 are transmitted through computer network 125 to the respective financial institutions as determined by the electronic 20 address. While the Internet is a preferred computer network, other computer networks may also be used. For example, the electronic address may include a phone number that the client computer system uses to dial and transmit the information directly to the financial institution's 25 computer network. The electronic address used with the update requests may be a Uniform Resource Locator (URL) corresponding to the financial institution's web site or may be an email address, or any other address used to uniquely identify the financial institution.

30 In the example shown, the user has requested that at least three financial institutions receive an update

request. Bank 130 receives update request 128, broker 150 receives update request 148, and other financial institution(s) 170 receive update request 168. Each of the financial institutions includes a process to validate the 5 client (bank 130 includes client validation process 135, broker 150 includes client validation process 155, and other financial institution(s) 170 includes client validation process 175). The client validation process uses a client identifier and a client access key or 10 password to ensure that the update request is being received from the client and not an imposter or other individual. Each of the financial institutions also includes a process to update the client contact information (bank 130 includes update client address process 140, 15 broker 150 includes update client address process 160, and other financial institution(s) include update client address process 180). The update client information processes each update a client data store maintained by the respective financial institution (bank 130 maintains client 20 data store 145, broker 150 maintains client data store 165, and other financial institution(s) 170 maintains client data store 185). The data stores may include a flat file, a database, or other files used to store client information. The client data files are each updated with 25 the updated client contact information.

Figure 2 is a user interface sequence showing the interface presented to the user by a personal financial software program. The user enters or updates his personal information using personal information update screen 200. 30 Personal information update screen 200 includes fields to enter or edit the client's information. First name field

202 is used to enter or update the client's first name. Middle name field 204 is used to enter or update the client's middle name. Last name field 206 is used to enter or update the client's last name. Two address line fields 5 (field 208 and 210) are provided for the user to enter or update the client's mailing address. City field 212 is used to enter or update the client's city. Likewise, state field 214 and zip field 216 are used to enter or update the client's state and zip code, respectively. Phone field 218 10 is used to enter or update the phone number the client wishes to include for telephone contact and fax field 220 is used to enter or update a fax number if the client has a fax number. Finally, email field 222 is used to enter or update an email address corresponding to the client. When 15 the entries or updates are completed, the user presses "OK" command button 224 to move to the next screen. To abort changes to the user's personal information, the user presses "Cancel" command button 226.

When the user presses "OK" command button 224, 20 notification screen 230 appears notifying the user that his personal information has been changed and offering to notify online financial institutions regarding the change. If the user realizes that his online financial information is not current, he selects "Edit Online Institution 25 Information" command button 232 which causes edit online institution data screen 250 to appear.

Edit online institution data screen 250 provides fields for the user to manage his online institutions. One or more financial institution name fields 252 are provided 30 to identify the financial institution. The user can enter a name that he will recognize as applying to the particular

financial institution. Electronic address field **254** is provided for the user to enter in an electronic address, such as a URL, that is used to contact the financial institution's computer system. User identifier field **256** is used to enter the identifier corresponding to the user and established with the financial institution. Password field **258** is used to enter a password that corresponds with the entered user identifier at the financial institution's computer system. The user selects "Add Institution" command button **264** to add additional financial institutions. To cancel changes, the user selects "Cancel" command button **262** which returns to notification screen **230** without recording any changes made by the user on edit online institution data screen **250**. To confirm changes made by the user on edit online institution data screen **250**, the user selects "OK" command button **260** and returns back to notification screen **230**.

In response to the question posed in notification screen **232**, the user either presses "YES" command button **234** or "NO" command button **236**. If the user presses "NO" command button **236**, the changes are made to the user's personal information but no institutions are notified (at this time) of the changes. The user may wish to notify selected financial institutions at a later time, perhaps after establishing additional user identifiers and passwords with one or more additional financial institutions. If the user presses "YES" command button **234**, then select institutions screen **270** appears.

Select institutions screen **270** allows the user to select one or more financial institutions using checkbox **272** located beside the corresponding financial

institution(s). One or more name fields 274 appears to identify the financial institution. If numerous financial institutions appear on select institutions screen 270, the user can select "Select All" command button 276 in order to 5 mark each checkbox 272. "Send" command button 278 is used to invoke send data routine 290. Send data routine 290 packages the personal information and sends it to the selected financial institutions' computer systems using the provided institution data. Finally, "Cancel" command 10 button is used to cancel select institutions screen 270 and return to notification screen 230, perhaps if the user realizes that one or more financial institutions need to be added or edited before sending.

Figure 3 is a component diagram showing the components 15 used to update client information on both the client computer system and the financial institution's computer system. Client personal financial software system 300 resides on the client's computing device. Financial institution online update software 310 is used to edit 20 information pertaining to financial institutions. This information is stored as financial institution data 320. Personal information update software 330 is used to edit information pertaining to the client's personal contact 25 information. This contact information is stored as personal information data 340. Network software 350 is used to package personal information data 340 and send to one or more financial institutions using financial institution data 320. Network software 350 sends updated 30 client data packet 355 to financial institution online software system 360.

Financial institution online software system 360 resides on the financial institution's computer system. It receives updated client data packet 355 sent from the client computing device. Validation software 365 is used 5 to analyze updated client data packet 355 and validate the client. Validation may be performed using a user identifier and password included in updated client data 355. In addition, updated client data packet 355 may be encrypted using public-key / private-key encryption. Using 10 public-key / private-key encryption, updated client data packet 355 is encrypted using a private key corresponding to the client. Only the client has the private key. Other computer systems, including the financial institution's computer system, can obtain the client's public key which 15 will decipher data packet 355. Deciphering the data using the public key verifies that the data was encrypted using the client's private key, thus providing a digital signature verifying that indeed the client was the computing device that encrypted the data. Other 20 established public key security mechanisms, such as the use of digital certificates, and third party certificate revocation list servers and associated certificate authorities can also be used to verify the identity of the client.

25 If the client is validated, update client data software 370 is used to update client data 380, such as the client database maintained by the financial institution. Return confirmation software 390 is used to send confirmation message 395 back to the client. For enhanced 30 security, confirmation message 395 may be sent using both the old contact information and the updated contact

information. In this manner, if the user had not moved and an unauthorized person sent the update request from the client's computing device, then the client would receive the confirmation message and be able to take corrective 5 action to prevent the unauthorized person from redirecting the client's financial information.

Figure 4 is a flowchart showing the processing performed on the client computer system. Processing commences at 400 whereupon the client updates his personal 10 contact information (step 410). A determination is made as to whether the user wishes to update his financial institution data (decision 420). Decision 420 may be in response to the user selecting an option to edit the data corresponding to his online financial institutions. If the 15 user wishes to change online financial institution information, decision 420 branches to "yes" branch 425 and the user adds, modifies, or deletes online financial institution information (step 430), otherwise decision 420 branches to "no" branch 435.

20 A decision is made as to whether the user wishes to send the updated personal contact information to one or more financial institutions (decision 440). If the user does not wish to send the updated data to one or more financial institutions, "no" branch 445 is taken and 25 processing ends at 450. On the other hand, if the user wishes to send updated information to one or more financial institutions, decision 440 branches to "yes" branch 455 whereupon the user selects one or more financial institutions to which the data should be sent (step 460). 30 The access data (Web address, user identifier, password, etc.) for the first selected financial institution is

retrieved (input 470). An update request is created and sent using the retrieved financial institution information and the updated client information (step 480). A determination is made whether there are more selected financial institutions to which the updated client information needs to be sent (decision 490). If there are more institutions, decision 490 branches to "yes" branch 493 which loops back to process the next selected financial institution. This processing continues until there are no more selected financial institutions to process, whereupon decision 490 branches to "no" branch 496 and processing ends at 499.

Figure 5 is a flowchart showing the processing performed by the financial institution's computer system. Processing commences at 500 whereupon the financial institution's computer system receives an update request from a client (step 505). A user identifier and password corresponding to the client is received from the received information (input 510). This information is used to validate the client. A determination is made as to whether the user identifier and password are valid (decision 515). If they are not valid, decision 515 branches to "no" branch 520 whereupon an error message is returned to the client (output 525) and processing of the update request ends at 530.

If the user identifier and password are valid, decision 515 branches to "yes" branch 535 whereupon the received client request is analyzed (step 540). A determination is made as to whether the request is to update the client's contact information (decision 545). If the request is not to update the client's contact

information, decision **545** branches to "no" branch **550** whereupon the request is passed to another routine to handle the client's request (step **555**) and processing ends at **560**.

5 If the client's request is to update his client information, decision **545** branches to "yes" branch **565** whereupon the updated client contact information is retrieved from the update request (input **570**). The retrieved information is used to update (step **575**) client data **578**. A determination is made whether the update request was processed successfully (decision **580**). If the request was processed successfully, decision **580** branches to "yes" branch **582** whereupon a confirmation message is returned to the user (step **585**). On the other hand, if the request was not processed successfully, decision **580** branches to "no" branch **588** whereupon an error message is returned to the client. Processing then ends at **595**.

Figure 6 illustrates information handling system **601** which is a simplified example of a computer system capable of performing the operations at either the client or server computer systems. Computer system **601** includes processor **600** which is coupled to host bus **605**. A level two (L2) cache memory **610** is also coupled to the host bus **605**. Host-to-PCI bridge **615** is coupled to main memory **620**, includes cache memory and main memory control functions, and provides bus control to handle transfers among PCI bus **625**, processor **600**, L2 cache **610**, main memory **620**, and host bus **605**. PCI bus **625** provides an interface for a variety of devices including, for example, LAN card **630**. PCI-to-ISA bridge **635** provides bus control to handle transfers

between PCI bus 625 and ISA bus 640, universal serial bus (USB) functionality 645, IDE device functionality 650, power management functionality 655, and can include other functional elements not shown, such as a real-time clock 5 (RTC), DMA control, interrupt support, and system management bus support. Peripheral devices and input/output (I/O) devices can be attached to various interfaces 660 (e.g., parallel interface 662, serial interface 664, infrared (IR) interface 666, keyboard interface 668, mouse interface 670, and fixed disk (HDD) 10 672) coupled to ISA bus 640. Alternatively, many I/O devices can be accommodated by a super I/O controller (not shown) attached to ISA bus 640.

BIOS 680 is coupled to ISA bus 640, and incorporates 15 the necessary processor executable code for a variety of low-level system functions and system boot functions. BIOS 680 can be stored in any computer readable medium, including magnetic storage media, optical storage media, flash memory, random access memory, read only memory, and 20 communications media conveying signals encoding the instructions (e.g., signals from a network). In order to attach computer system 601 to another computer system to copy files over a network, LAN card 630 is coupled to PCI-to-ISA bridge 635. Similarly, to connect computer system 25 601 to an ISP to connect to the Internet using a telephone line connection, modem 675 is connected to serial port 664 and PCI-to-ISA Bridge 635.

While the computer system described in **Figure 6** is capable of executing the invention described herein, this 30 computer system is simply one example of a computer system.

Those skilled in the art will appreciate that many other computer system designs are capable of performing the copying process described herein.

One of the preferred implementations of the invention 5 is an application, namely, a set of instructions (program code) in a code module which may, for example, be resident in the random access memory of the computer. Until required by the computer, the set of instructions may be stored in another computer memory, for example, on a hard 10 disk drive, or in removable storage such as an optical disk (for eventual use in a CD ROM) or floppy disk (for eventual use in a floppy disk drive), or downloaded via the Internet or other computer network. Thus, the present invention may be implemented as a computer program product for use in a 15 computer. In addition, although the various methods described are conveniently implemented in a general purpose computer selectively activated or reconfigured by software, one of ordinary skill in the art would also recognize that such methods may be carried out in hardware, in firmware, 20 or in more specialized apparatus constructed to perform the required method steps.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that, based upon the teachings herein, 25 changes and modifications may be made without departing from this invention and its broader aspects and, therefore, the appended claims are to encompass within their scope all such changes and modifications as are within the true spirit and scope of this invention. Furthermore, it is to 30 be understood that the invention is solely defined by the

appended claims. It will be understood by those with skill in the art that if a specific number of an introduced claim element is intended, such intent will be explicitly recited in the claim, and in the absence of such recitation no such limitation is present. For non-limiting example, as an aid to understanding, the following appended claims contain usage of the introductory phrases "at least one" and "one or more" to introduce claim elements. However, the use of such phrases should not be construed to imply that the introduction of a claim element by the indefinite articles "a" or "an" limits any particular claim containing such introduced claim element to inventions containing only one such element, even when the same claim includes the introductory phrases "one or more" or "at least one" and indefinite articles such as "a" or "an"; the same holds true for the use in the claims of definite articles.